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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,924	03/26/2004	Toni Kopra	872.0180.U1(US)	9401

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EXAMINER	
SAMS, MATTHEW C	

ART UNIT	PAPER NUMBER
2617	

DATE MAILED: 06/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/810,924	KOPRA ET AL.	
	Examiner	Art Unit	
	Matthew C. Sams	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-50* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-50* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 August 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statements filed on 3/26/2004 and 9/19/2005 have been considered.

Drawings

2. The drawings were received on 8/9/2004. These drawings are acceptable.

Claim Objections

3. Claims 10 & 27 are objected to because of the following informalities: The limitation "...extracts the at least one feature from only the first segment and further transmits the *second segment* and not the first segment" is unclear to the examiner. The examiner is going to assume "*second segment*" should read, "first extracted feature from the first segment".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-12, 16, 17, 21, 23-29, 33-39, 41-46, and 48-50 are rejected under 35 U.S.C. 102(e) as being anticipated by Chun (US 2004/0229611).

Regarding claim 1, Chun teaches a mobile station (Fig. 3 [100]) comprising an interface to receive a media sample (Fig. 2 [112, 122 & 124]), a processor to extract at least one feature from a digital version of the media sample (Page 2 [0019]) and a transmitter to transmit the at least one extracted feature over a wireless communication link. (Page 1 [0018], Page 2 [0019-0020] and Fig. 2 [120])

Regarding claim 2, Chun teaches an interface comprises a transducer. (Fig. 2 [126])

Regarding claim 3, Chun teaches the transducer comprises a microphone and the media sample comprises an audio sample. (Fig. 2 [126], Page 2 [0020] & Page 3 [0037])

Regarding claim 4, Chun teaches the transducer comprises a camera and the media sample comprises a visual sample. (Fig. 2 [110])

Regarding claim 5, Chun teaches the interface comprises one of a cable and a wireless link. (Fig. 2 [120] & Page 3 [0045])

Regarding claim 6, Chun teaches the media sample that the interface receives is the digital version. (Page 2 [0019, 0020 & 0030])

Regarding claim 7, Chun teaches the transmitter is further to transmit a message that includes at least one extracted feature and no portion of the digital version of the media sample. (Page 2 [0020] *e.g.* pattern-matching)

Regarding claim 8, Chun teaches the processor is further to adaptively select a number of features to extract based on the digital version of the media sample. (Pages 4-5 [0060])

Regarding claim 9, Chun teaches the processor is further to adaptively select at least one type of feature to extract based on the digital version of the media sample, the processor extracts at least one feature of the adaptively selected type, and wherein the transmitter is further to transmit an identifier of the selected type of feature. (Pages 4-5 [0052-0060])

Regarding claim 10, Chun teaches the digital version of the received media sample defines a first time-bounded segment and a second time-bounded segment and the processor extracts the at least one feature from the first segment and further transmits the first feature from the first segment and not the entire first segment. (Page 3 [0039-0043] and Fig. 5)

Regarding claim 11, Chun teaches the processor further extracts a second feature from the second segment. (Page 3 [0039-0043] and Fig. 5)

Regarding claim 12, Chun teaches a user interface by which a user may initiate the processor to so extract and a buffer to store at least a portion of the digital version of the media sample prior to the user so initiating. (Fig. 2 [164])

Regarding claim 16, Chun teaches a user interface by which a single user input initiates a processor to extract the at least one feature, a wireless communications link to be established between the MS and a communication service and at least one

extracted feature to be transmitted over the wireless communications link. (Page 1 [0018], Page 3 [0039] & Page 5 [0070] through Page 6 [0078])

Regarding claim 17, Chun teaches a single user input further initiates a buffer disposed between the transducer and the processor to begin storing at least a portion of the digital version of the media sample. (Fig. 2 [112, 122 & 160])

Regarding claim 21, Chun teaches a buffer (Fig. 2 [112 & 124]) disposed between the transducer (Fig. 2 [110 & 126]) and the processor (Fig. 2 [200]) to store at least a portion of one of the digital version of the media sample and the media sample. (Page 2 [0031] & Page 3 [0035])

Regarding claim 23, the limitations of claim 23 are rejected as being the same reason set forth above in claim 1.

Regarding claim 24, the limitations of claim 24 are rejected as being the same reason set forth above in claim 7.

Regarding claim 25, the limitations of claim 25 are rejected as being the same reason set forth above in claim 8.

Regarding claim 26, the limitations of claim 26 are rejected as being the same reason set forth above in claim 9.

Regarding claim 27, the limitations of claim 27 are rejected as being the same reason set forth above in claim 10.

Regarding claim 28, the limitations of claim 28 are rejected as being the same reason set forth above in claim 11.

Regarding claim 29, the limitations of claim 29 are rejected as being the same reason set forth above in claim 12.

Regarding claim 33, the limitations of claim 33 are rejected as being the same reason set forth above in claim 16.

Regarding claim 34, the limitations of claim 34 are rejected as being the same reason set forth above in claim 17.

Regarding claim 36, the limitations of claim 36 are rejected as being the same reason set forth above in claim 21.

Regarding claim 37, Chun inherently teaches a computer program embodied on a computer readable medium to uniquely match a plurality of extracted features to a feature set stored in a database comprising a first set of computer instructions to receive over a network a message that includes received features (Fig. 3 [50 & 300]), a second set of computer instructions to extract additional features from the message (Fig. 3 [320 & 340]) and a third set of computer instructions to search a database of feature sets until a plurality of received features combined with extracted additional features uniquely matches only one feature set of the database. (Fig. 3 [340 & 400], Fig. 4 and Fig. 5)

Regarding claim 38, Chun teaches that each feature set is associated with a media file title, the computer program further comprising a fourth set of computer instructions to transmit, over the network to a sender of the message, a reply that includes the media file title. (Page 3 [0042-0043])

Regarding claim 39, Chun teaches that a communications link between a sender of the message that includes the received features and the computer program of claim 34 remains open between at least a first time defined by receipt of the message that includes received features and a second time defined by transmission of the reply. (Fig. 4, Fig. 5 and Page 4 [0053] through Page 5 [0069])

Regarding claim 41, Chun teaches a third set of computer instructions further is to search the database of feature sets using only the received features, followed by searching the database with the extracted additional features. (Page 5 [0072] through Page 6 [0077])

Regarding claim 42, Chun teaches the third set of computer instructions includes instructions to search the database of feature sets using only the received features and to simultaneously extract additional features from the message. (Page 3 [0045] through Page 5 [0064])

Regarding claim 43, Chun teaches that the second set of computer instructions is to extract additional features from the received features. (Page 3 [0045] through Page 5 [0064])

Regarding claim 44, Chun teaches the second set of computer instructions is to extract additional features from a portion of the message that includes a segment of a digital media sample. (Page 3 [0045] through Page 5 [0064] *e.g.* pattern matching)

Regarding claim 45, Chun teaches the second set of computer instructions is further to extract additional features from the received features. (Page 3 [0045] through Page 5 [0064] *e.g.* pattern matching)

Regarding claim 46, Chun teaches a fifth set of computer instructions to send a request message requesting further features when the third set of computer instructions fails to find a unique match in the database and to re-execute at least the first and third sets of computer instructions upon receiving a second message that includes received further features. (Fig. 4, Fig. 5 and Page 3 [0045] through Page 5 [0064])

Regarding claim 48, the limitations of claim 48 are rejected as being the same reason set forth above in claim 1.

Regarding claim 49, the limitations of claim 49 are rejected as being the same reason set forth above in claims 1 & 2.

Regarding claim 50, the limitations of claim 50 are rejected as being the same reason set forth above in claim 1.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 13-15, 22, 30-32, 40 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chun in view of Wang et al. (US-6,990,453 hereafter, Wang).

Regarding claim 13, Chun teaches the limitations of claim 1 above including taking samples of the digital media and transmitting them (Page 2 [0019]), but differs from the claimed invention by not explicitly reciting the processor is to extract a plurality

of *n* timepoints from the digital version of the media sample and an identifier that links each spectral slice to at least one timepoint.

In an analogous art, Wang teaches a system and method for recognizing sound and music signals by extracting a plurality of *n* timepoints from the digital version of the media sample and transmitting the *n* spectral slices of the digital version of the media sample along with an identifier that links the slices to a timepoint. (Col. 4 lines 47-64 and Col. 8 line 31 through Col. 10 line 59) At the time the invention was made, it would have been obvious to one of ordinary skill in the art to implement the real-time search system of Chun after modifying it to incorporate the extraction of *n* timepoints of Wang. One of ordinary skill in the art would have been motivated to do this since it enables the searching system to get a fingerprint of the original file without using the required bandwidth of sending the entire file.

Regarding claim 14, Chun in view of Wang teaches that each (n+1) spectral slice corresponds to a larger portion of the digital version of the media sample than a preceding n^{th} slice. (Wang Col. 12 line 38 through Col. 13 line 10)

Regarding claim 15, Chun in view of Wang teaches a receiver for receiving a sample identification message and the processor is further to terminate transmitting further timepoints and spectral slices in response to receipt of the sample identification message. (Wang Col. 16 lines 3-32)

Regarding claim 22, Chun in view of Wang teaches a receiver (Chun Fig. 2 [120]) to receive a request for further features message, wherein in response to receiving the request message, the processor extracts at least a second feature from at least a

portion stored in the buffer and further wherein the transmitter transmits at least a second feature. (Chun Figs. 4 & 5 and Wang Col. 16 lines 3-32)

Regarding claim 30, the limitations of claim 30 are rejected as being the same reason set forth above in claim 13.

Regarding claim 31, the limitations of claim 31 are rejected as being the same reason set forth above in claim 14.

Regarding claim 32, the limitations of claim 32 are rejected as being the same reason set forth above in claim 15.

Regarding claim 40, Chun in view of Wang teaches a third set of computer instructions further is to determine a link address for a media file uniquely associated with the only one feature set and a fourth set of computer instructions to transmit the link address in the reply. (Chun Page 2 [0019] and Wang Col. 4 lines 47-64 and Col. 8 line 31 through Col. 10 line 59)

Regarding claim 47, Chun in view of Wang teaches the request message includes at least one of a number and a type of further features. (Chun Page 5 [0061-0062] & Wang Col. 12 line 38 through Col. 13 line 10)

8. Claims 18-20 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chun in view of Ravago et al. (US-6,529,584 hereafter, Ravago).

Regarding claim 18, Chun teaches the limitations of claim 1 above, but differs from the claimed invention by not explicitly reciting extracting MPEG-7 descriptors from the digital version of the media sample.

In an analogous art, Ravago teaches an interactive audio delivery system that includes extracting MPEG-7 file information. (Col. 4 lines 29-61) At the time the invention was made, it would have been obvious to one of ordinary skill in the art to implement the real-time information searching system of Chun after modifying it to incorporate the MPEG-7 file information of Ravago. One of ordinary skill in the art would have been motivated to do this since the audio tags can provide additional information to the user about the audio file. (Col. 4 lines 29-56)

Regarding claim 19, Chun in view of Ravago teaches the processor extracts MPEG-7 file information that is non-reconstructive of the digital version of the media sample. (Ravago Col. 4 lines 29-61 *e.g.* time value)

Regarding claim 20, Chun in view of Ravago teaches the extracted features (Ravago Col. 4 lines 29-61) for which the transmitter is to transmit are non-reconstructive of the digital version of the media sample. (Chun Page 3 [0039-0043], Fig. 5 and Ravago Col. 4 lines 29-61)

Regarding claim 35, the limitations of claim 35 are rejected as being the same reason set forth above in claim 19.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew C. Sams whose telephone number is (571)272-8099. The examiner can normally be reached on M-F 7:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571)272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MCS
6/22/2006

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